UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|----------------|----------------------|---------------------|------------------|
| 10/649,786 | 08/28/2003 | Tamon Kasajima | 033211-038 | 5596 |
| 20999 7590 11/15/2007 FROMMER LAWRENCE & HAUG | | | EXAMINER | |
| 745 FIFTH AV | ENUE- 10TH FL. | | EVANS, JEFFERSON A | |
| NEW YORK, I | NY 10151 | | ART UNIT | PAPER NUMBER |
| | | | 2627 | |
| | | | | |
| | | | MAIL DATE | DELIVERY MODE |
| | • | | 11/15/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | ······································ | Application No. | Applicant(s) | | | |
|--|--|---|--|--|--|--|
| Office Action Summary | | 10/649,786 | KASAJIMA ET AL. | | | |
| | | Examiner | Art Unit | | | |
| | | Jefferson Evans | 2627 | | | |
| Period fo | The MAILING DATE of this communication app or Reply | ears on the cover sheet with the c | orrespondence address | | | |
| WHIC - Exte after - If NC - Failu Any | ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DANSIONS of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. O period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from , cause the application to become ABANDONE | N. nely filed the mailing date of this communication. D (35 U.S.C. § 133). | | | |
| Status | | | , | | | |
| 1)⊠ | Responsive to communication(s) filed on <u>04 Se</u> | eptember 2007. | | | | |
| <i>,</i> — | This action is FINAL . 2b) This action is non-final. | | | | | |
| 3) | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is | | | | | |
| | closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. | | | | | |
| Disposit | ion of Claims | | | | | |
| 5)□ 6)⊠ 7)⊠ | Claim(s) <u>1-11</u> is/are pending in the application. 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed. Claim(s) <u>1-8, 10, and 11</u> is/are rejected. Claim(s) <u>9</u> is/are objected to. Claim(s) are subject to restriction and/or | vn from consideration. | | | | |
| Applicat | ion Papers | | | | | |
| 10) | The specification is objected to by the Examine The drawing(s) filed on is/are: a) according a construction and any not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Examine | epted or b) objected to by the I drawing(s) be held in abeyance. See ion is required if the drawing(s) is ob | e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d). | | | |
| Priority (| under 35 U.S.C. § 119 | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | | | | | |
| Attachmer | nt(s) · | _ | | | | |
| 2) Notice 3) Infor | ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO/SB/08) er No(s)/Mail Date | 4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other: | ate | | | |

Application/Control Number: 10/649,786 Page 2

Art Unit: 2627

Claims 1 to 11 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1-6, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Narushige et al (JP 56-156914). Note figures 3 and 4 which depict a conductive metal layer (16,19) planar with and adjacent to a coil conductor 13. It is indicated that the head operates at a high frequency and that an alternating-current magnetic flux with a frequency f is applied to the conductive layer, which indicate that an alternating current is applied to the coil conductor. The conductive metal layer may or may not be electrically connected to the coil conductor.

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narushige et al.

Application/Control Number: 10/649,786 Page 3

Art Unit: 2627

As per Claim 7

Narushige does not expressly disclose having a conductive metal layer on both sides of the coil conductor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a conductive metal layer both above and below the conductive coil. The motivation would have been: it was known in the art to provide additional copies of beneficial elements and it would have been recognized that such a conductive metal layer would have functioned whether above or below the conductive coil, i.e., the magnetic phenomenon involved would not depend on the conductive metal layer being above or below the conductive coil.

As per Claim 8

Narushige does not expressly disclose whether the conductive coil penetrates the conductive metal layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to not have the conductive coil penetrate the conductive metal layer. The motivation would have been: it was known in the art that providing vias/openings for a portion of one thin film layer to penetrate another thin film layer added to the level of complexity of a manufacturing process.

Allowable Subject Matter

5. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Application/Control Number: 10/649,786 Page 4

Art Unit: 2627

6. Response to Arguments filed 9-4-2007

Applicant contends that Narushige does not disclose a conductor coil would around a U-shaped yoke by a plurality of turns.

In response, the Examiner notes that the poles 11 and 12 are connected at a back gap region and thus form a U-shaped yoke. It is also noted that coil 13 of figures 3 and 4 is a pancake type coil and that only the cross-section of the windings between the poles are shown in the figures and that the coil 13 actually does wrap around the U-shaped coil by wrapping around the backgap region. Narushige simply does not show the cross-sectional portions of the coils to the right of the backgap region as shown in the figures, i.e., the portions not between the two poles. This is very common for documents showing such magnetic heads as they limit what they depict to the regions between and immediately above and below the poles so as to simplify the figures.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2627

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferson Evans whose telephone number is 571-272-7574. The examiner can normally be reached on weekdays noon to 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAE

November 12, 2007

Jefferson Evans Primary Examiner Art Unit 2627

> JEFFERSON EVANS PRIMARY EXAMINER